Comments regarding

Dietary Guidelines for Americans

Submitted to the
Dietary Guidelines Advisory Committee,
U.S. Department of Health and Human Services, and
U.S. Department of Agriculture

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The Center for Science in the Public Interest (CSPI) respectfully submits to the Dietary Guidelines Advisory Committee (DGAC), the U.S. Department of Health and Human Services (DHHS), and the U.S. Department of Agriculture (USDA) recommendations regarding the bulletin *Nutrition and Health: Dietary Guidelines for Americans.*

CSPI is a non-profit consumer education and advocacy organization that since 1971 has been working to improve the public's health through better nutrition and safer food. CSPI's work is supported primarily by its 800,000 members and subscribers to its *Nutrition Action Healthletter*, the nation's largest circulation health newsletter. CSPI does not accept any government or corporate funding.

CSPI's work was instrumental in passage of the Nutrition Labeling and Education Act of 1990 and the Alcoholic Beverage Labeling Act of 1988. Other initiatives include studies of the nutritional quality of restaurant foods, advocating trans fat labeling on packaged foods, and campaigns to promote low-fat milk consumption, improve school foods, stop misleading food and alcohol advertising, enforce food safety laws, and improve alcoholic-beverage labeling.

Enclosed are eight sets of comments regarding the following guidelines:

- Nutrient Adequacy
- Sodium
- Fibers
- Whole Grains
- Added Sugars
- Energy Balance
- Fatty Acids
- Restaurant Foods
- Food Dyes and Behavior
- Ethanol

Our comments are summarized in the oral testimony which will be presented to the committee on January 29, 2009, which is enclosed.

For more information or questions regarding these comments please contact Alexandra Lewin, Ph.D. at 202.777.8351 or alewin@cspinet.org.

Comments by the Center for Science in the Public Interest on Sodium

Salt – sodium chloride – is perhaps the deadliest ingredient in our food supply.

The health community is united in the conclusion that Americans are consuming far too much salt and other sources of sodium. Consuming less sodium is one of the single most important ways to prevent cardiovascular disease. The salt guideline, while currently quite good, should do even more to alert Americans to: the risks of consuming excess amounts of sodium, how much sodium is included in processed and restaurant foods, and the daily limit of sodium.

Sixty-five million Americans have high blood pressure,12 another 45 million people have "prehypertension,"13 and about 90 percent of Americans will eventually develop hypertension.14 African Americans' rate of hypertension is 60 percent greater, and rate of stroke deaths is 40 percent greater, than that of the general population.15

In contrast to the U.S. Government, the United Kingdom's Food Standards Agency (FSA) has made salt reduction a top priority and is both making consumers more aware of the health threat posed by excessive salt consumption and exerting strong pressure on the food and restaurant industries to gradually lower sodium levels to specified targets. The DGAC should provide an authoritative statement that would encourage our government, too, to make salt reduction a top health priority.

Despite experts' admonitions over the years, per capita sodium consumption has actually increased (according to NHANES surveys) from 2,800 mg in 1976-80 to 3,400 mg in 2003-04. According to the 2003-04 NHANES survey, 70 percent of adult males and 50 percent of adult females exceed the 2,300 mg Dietary Guidelines recommended level—even though those estimates omit salt added at the table or in cooking, and the NHANES respondents are thought to underestimate their actual consumption. Thus, actual daily consumption is probably closer to 4,000 mg,16 with high percentages of both males and females exceeding the recommended levels.

The extraordinary importance of lowering sodium consumption was highlighted in a 2004 commentary in the American Journal of Public Health coauthored by Claude Lenfant, then-Director of NHLBI, and two colleagues. The article estimated that reducing the sodium content of packaged and restaurant foods by 50 percent would prevent 150,000 deaths due cardiovascular disease per year.17 Reducing sodium consumption also would save tens of billions of dollars in health care costs. A preliminary RAND Corp. study estimates that reducing average sodium from 3,400 mg to 2,300 mg per day would reduce direct medical costs by $18 billion per year and quality of life by $32 billion per year.18 A further reduction to 1,500 mg per day would reduce medical costs by $28 billion per year.

In the early 1980s, the FDA called for vigorous voluntary action on the part of industry to reduce sodium levels. We evaluated the changes in almost 100 foods that were produced in 1983 and still produced in 2004.19 The average change in sodium content of those foods was only a 5 percent decrease, a decline of 0.3 percent per year—a far lower rate than what would be needed to achieve the 50-percent decrease over 10 years that the American Medical Association, American Heart Association, American Public Health Association, and many other experts have recommended.20

In 2005, CSPI evaluated the sodium content of 528 randomly chosen manufactured and restaurant foods. Notwithstanding the 2005 Dietary Guidelines' strong admonition to consume less salt, when we surveyed the same foods in late 2008, we found that the average sodium content changed (increased) by less than one percent. Clearly, the food industry needs to be sent a stronger signal that major sodium reductions are essential.

I. The guidelines should explicitly state the direct link of sodium consumption to heart attacks and death

Not only is sodium in the American diet a major cause of high blood pressure, but there is now hard evidence that curbing sodium also reduces the risk of cardiovascular disease (heart attack, stroke, coronary bypass, angioplasty, or cardiovascular death). According to a recent study of more than 3,000 overweight people aged 30 to 54 with pre-hypertension, those who were randomly assigned to reduce their sodium intake (the average reduction was roughly 800 to 1,000 milligrams a day) for 1½ to 3 years were 30 percent less likely to be diagnosed with cardiovascular disease over the next 10 to 15 years.21 Also, they reduced their risk of dying from cardiovascular disease by 20 percent, although that data was not statistically significant. Furthermore, when researchers gave salt tablets (4,600 mg of sodium) to 16 young healthy normotensives who were consuming a low-sodium diet (600 mg a day) for five days, vascular endothelial function, left ventricular mechanical relaxation, and electric repolarization were impaired.22 Also, in a study of elderly Taiwanese military veterans living in a retirement home, researchers replaced regular salt with potassium-enriched salt, thereby boosting the men's potassium intake while lowering their sodium intake.23 After almost three years of follow-up, those men who reduced their sodium intake enjoyed a 41-percent reduction in cardiovascular disease deaths. The guidelines should explicitly state that there is a direct link not only between sodium consumption and blood pressure, but also between sodium and cardiovascular disease.

II. The guidelines should lower the recommendation of daily consumption of sodium for most adults to 1,500 mg.

The 2005 Dietary Guidelines recommends that people limit consumption of sodium to 2,300 mg per day unless they are in certain population groups. Individuals with hypertension, blacks, and middle-aged and older adults are advised to limit their sodium to 1,500 mg per day. Because about two-thirds of the population is in one or another of those "specific population groups,"[24] the recommendation of daily consumption of

sodium by adults should be lowered to 1,500 mg. Lower limits should be indicated for certain other population groups, such as 1,300 mg for people 51 to 70 years old and 1,200 mg for those over 70. Those numbers reflect the Institute of Medicine's (IOM) 2004 Dietary Reference Intakes for daily "Adequate Intake" for sodium. The IOM offers two sets of recommendations, an adequate intake and an upper level intake. But according to the IOM, "…the UL is not a recommended intake and, as with other ULs, there is no benefit to consuming levels above the AI."[25]

III. The Guidelines should include a specific sodium recommendation for children.

The 2005 Sodium and Potassium guideline recommends intakes of potassium, but not sodium, for children. (Currently, recommendations for sodium intake by children are only included in the 2005 DGAC report – not the Dietary Guidelines itself - and are higher than those recommended by the IOM.) The IOM's recommended adequate intake of sodium is 1,000 mg/day for children aged 1 to 3, 1,200 mg/day for children aged 4 to 8, and 1,500 mg/day for children aged 9 to 13.26 Children, however, children are consuming an average of more than twice the recommended amounts of sodium.[27]

A high-salt diet in childhood is associated with higher blood pressure in children that likely will lead to increased risks of hypertension, strokes and heart disease later in life.28 Reducing the sodium content in kids' foods would help train their taste buds to enjoy lower-salt foods. In addition, some researchers have attributed the rise in the rate of kidney stones seen in children to the excess amounts of salt in children's diets.

CSPI recently conducted a study of the nutritional quality of 1,474 kids' meals at 13 top chain restaurants and found that not only are those meals loaded with calories, but that every single meal was too high in sodium (based on 1/3 of the IOM's recommended adequate intake for children).[29] In fact, many of the meals included over a whole day's worth of sodium. For example, the KFC kids' meal that includes crispy chicken strips, green beans, baked beans, Tropicana fruit punch, and Teddy Grahams supplies 2,215 mg of sodium. At Denny's, the Galactic Grilled Cheese and Moon Crater Mashed Potatoes with Gravy combo meal has 1,385 mg of sodium. Chili's offers a grilled chicken sandwich, rice, and 1 % chocolate milk meal that contains 1,610 mg of sodium. At McDonald's, a child can order a meal that includes a double cheeseburger, small French fries, and a 12 oz. fountain drink meal - and 1,340 mg of sodium.

The guidelines should make specific recommendations for children's intake of sodium and also highlight the need to pay careful attention to the amounts of sodium consumed by children outside of the home.

IV. The sodium guideline should emphasize the extraordinarily high levels of sodium in many restaurants foods.

Although the 2005 guideline does state that "…food served by food establishments may be high in sodium," it does not emphasize sufficiently the extraordinarily high levels of

sodium in many restaurant foods. The sodium content of foods listed in Table 15 of the Guidelines does not include a single restaurant meal. The Dietary Guidelines should provide more details regarding high-sodium foods in restaurants, especially given that one-third of all calories are consumed away from home. According to CSPI's lab analyses:[30]

- Typical deli sandwiches have 1,000 mg or more of sodium. Some, like corned beef with mustard, ham with mustard or mayo, or a turkey club, contain closer to 2,000 mg of sodium. A Reuben or "overstuffed corn beef" sandwich can contain closer to 3,000 mg of sodium.

- Nearly all main courses at popular Italian restaurants had at least 1,000 to 2,000 mg of sodium. Most Chinese dishes and Mexican platters had at least 2,000 to 3,000 mg of sodium.

- Many fast foods include high amounts of sodium. Breakfast sandwiches include 1,000 mg of sodium or more. Also, many grilled chicken sandwiches and large cheeseburgers have well over 1,000 mg of sodium.

- Many appetizers at popular dinner house chains are loaded with sodium. For example, an order of buffalo wings or fried mozzarella sticks has approximately 2,000 mg of sodium.

If the Dietary Guidelines for Americans is going to provide useful information to consumers, it is essential that it give practical advice for eating in restaurants and other food service establishments where Americans get about one-third of their calories.

V. Recommended research.

We urge the committee to recommend that new research be sponsored to better estimate sodium consumption and to monitor changes in consumption.

- It is important to know how much sodium is consumed from packaged foods, restaurant foods, salt added during cooking, and salt added at the table. A widely cited report was conducted decades ago involving only 62 adults who were not nationally representative.31 The committee should recommend that the FDA, CDC, or NHLBI conduct a new study to more accurately identify the sources of sodium in the American diet.

- Health officials (and the DGAC) do not have access to reliable data on sodium consumption. Purported per capita sodium consumption is deduced from dietary recalls conducted by NHANES. Unfortunately, the NHANES methodology includes significant flaws: food intake is typically underestimated, brand-to-brand variations (in both restaurant and packaged foods) are large, and salt added to foods by consumers is not included. Hence, the widely used NHANES figures probably underestimate actual consumption by 15 percent or more.32 Urinary-

excretion studies are the only accurate means of determining total sodium consumption, but, unfortunately, only small, non-representative studies are available. The DGAC should recommend that 24-hour urinary-excretion measurements be added to the NHANES study protocols.

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